

Phasefale Vat Pac: Owner Operating Instruction

Operation

The Vat Pac is specifically designed to control Milk in Vats. Operation is fully automatic, if you desire no operator intervention is required.

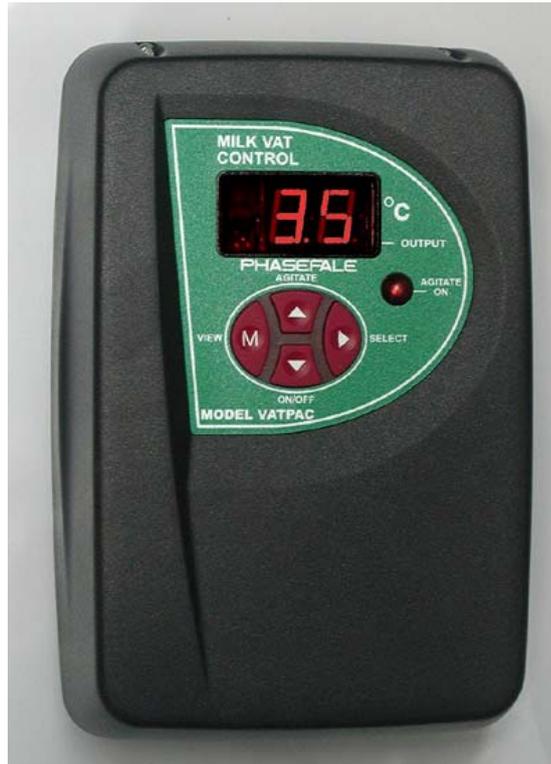
Temperature Control

Vat Pac switches the refrigeration on and off according to the milk temperature sensed by the sensor and the settings programmed into the control.

It does this in the most efficient way to reduce power consumption whilst ensuring optimum Milk condition. At the same time, it protects your refrigeration plant from damage by limiting the number of starts per hour that the refrigeration can make.

Temperature Control On or Off

Whenever the "output" LED is on (bottom right hand corner of the temperature display area) the cooling is on. This operates



automatically displays the set point, and then returns to temperature display.

Temperature Control Operation

As shipped from the factory, Vat Pac is set to switch on the cooling (cutin) at 3.5°C, and off (cutout) at 3.0°C (38/37°F).

This can be adjusted by re-programming the set-point (see programming).

As an in-built safety feature for the refrigeration equipment, Vat Pac ensures that once the refrigeration shuts off at 3.0°C, it cannot come on again for 8 minutes, even if the temperature rises above 3.5°C.

a valve to inject refrigerant to the Vat, and the refrigeration motor/compressor usually starts a short time after this.

Viewing the Control setting

To view the current setting, press "view", Vat Pac

To ensure efficient cooling transfer to the Milk, whenever cooling is on (as indicated by the output LED), the agitator runs. Furthermore, the agitator "runs on" after cooling shuts off for 2 minutes to increase transfer.



Agitator (Stirrer)

The agitator always comes on if cooling is on. In addition, to ensure butterfat is continually mixed in with the milk, the agitator automatically switches on every 20 minutes for 2 minutes, even if the cooling has not come on.

Press the button labelled "agitator" to activate the stirrer for 15 minutes during milk sampling and transfers to ensure an even butterfat concentration throughout the milk. A separate agitator button may also be fitted remote from the control box that provides the same action.

Agitator On or Off

To determine if the agitator is on independently from the cooling, press the "select" button momentarily. The display shows either a steady circle (agitator off) or a rotating circle (agitator on) and then resumes temperature display.

Logging

Vat Pac stores temperature logs to the USB memory stick if fitted on a file **log.txt**.

Logging; Highest Temperatures

To view the highest temperatures logged;

- press "agitator" and "on/off" buttons together
- "Lo" is displayed
- Press "agitator", a reading (e.g. 4.5°) is displayed. In this case, 4.5°C was the highest temperature reached in the last hour.
- Press "agitator" again, a reading (e.g. 5.0°) is displayed. Here, 5.0°C is the highest temperature reached in, hour 2 hours previously.
- continue to press "agitator" the readings are displayed.

- Press "on/off", a reading (e.g. -4) is displayed. This tells you how many hours ago the highest reading was stored.
- Press "agitator" to continue back in time, or
- Press "select" to resume normal temperature display.

Logging; Lowest Temperatures

The sequence for the lowest temperatures is the same as above, except "on/off" is pressed instead of "agitator" to retrieve the low temperature logs and "agitator" instead of "on/off" is pressed to display the number of hour since the log was taken. Note, you can only access the highest or **lowest logs at one time**.

On/Off

To turn off the Vat Pac, press the "on/off" button. After a short delay, the display changes from the temperature to '-' indicating the unit is off. Depending on how the system is wired, Vat Pac may also switch off other equipment.

The agitator may still be turned on via the agitator button when the unit is off. This allows agitation while cleaning the Vat.

If power is lost to the Vat Pac and then restored, the control resumes the condition manually set, namely on or off.

Programming the control setting

The temperature setting of the Vat Pac can be re-programmed if required as follows;

- Press "view" and "select" together for 3 seconds
- "UL" is displayed, indicating program settings have been "unlocked".
- "SP" is displayed, this stands for cutin "set-point" 3.5° (or the current control setting) is displayed
- to increase the setting, press "agitator"
- to decrease the setting, press "on/off"
- to store the altered setting, press "view*"
- to abandon and keep the original setting, press "select"

Checking the control setting

Confirm the new or unaltered setting by pressing "view". Once a control setting is stored, it remains irrespective of power loss until altered.

Fault Condition

If the displays should read "Er", this indicates a temperature sensor fault. In this case call for immediate service.

A new Vat Pac will have "Er" stored in logging memory until 99 hours of operation have elapsed. This is normal.

Vat Pac

Vat Pac is wholly designed and manufactured by Phasefale Controls P/L in Australia to conform to AS 1189 for Bulk Milk Vats.